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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/169,781 10/08/98 KARAKASOGLU

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EXAMINER

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ART. UNIT

PAPER NUMBER

3736

DATE MAILED:

08/17/99

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/169,781

Applicant(s)
Karakasoglu

Examiner
Michael Astorino

Group Art Unit
3736



☒ Responsive to communication(s) filed on Oct 8, 1998

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-16 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-16 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☒ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 4

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

Specification

1. Applicant is missing section headings, appropriate correction is required. The following guidelines illustrate the preferred layout and content for patent applications. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

The following order or arrangement is preferred in framing the specification and, except for the reference to "Microfiche Appendix" and the drawings, each of the lettered items should appear in upper case, without underlining or bold type, as section headings. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) Title of the Invention.
- (b) Cross-References to Related Applications.
- (c) Statement Regarding Federally Sponsored Research or Development.
- (d) Reference to a "Microfiche Appendix" (see 37 CFR 1.96).
- (e) Background of the Invention.
 - 1. Field of the Invention.
 - 2. Description of the Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) Brief Summary of the Invention.
- (g) Brief Description of the Several Views of the Drawing(s).
- (h) Detailed Description of the Invention.
- (i) Claim or Claims (commencing on a separate sheet).
- (j) Abstract of the Disclosure (commencing on a separate sheet).
- (k) Drawings.
- (l) Sequence Listing (see 37 CFR 1.821-1.825).

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

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3. Claims 1-10 are rejected under 35 U.S.C. 101 because the applicant recites non-statutory subject matter.

Claim 1 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 1 recites that a first sensor in close proximity to the face of the patient. This recites a positive relationship to the human body. However, the human body is non-statutory subject matter and cannot be positively recited. Therefore, applicant should amend the claim to recite that a first sensor ^{is} adapted to be in close proximity to the face of the patient.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 6, 8-9 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. In claims 6 and 15, lines 2-3, the applicant recites an ambient sound sensing means in the vicinity of the patient. This limitation is indefinite for not specifically disclosing the limits of the claim.

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7. In claim 8, line 5, the term, supplying the same, is indefinite.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-16 rejected under 35 U.S.C. 103(a) as being unpatentable over Sullivan et al. in view of Scanlon.

In regards to claims 1, 5, and 11, Sullivan et al. discloses an apparatus on a breathing patient having a nose and mouth (columns 8-13) comprising a first sensor in close proximity to the face of the patient (12) for monitoring said air flow, an A/D conversion means (26), a filter (26), an estimate of air volume inhaled and exhaled and separating the apnea and hypopnea categories (column 13, lines 55-65) but does not disclose a wavelet transform feature extractor or a neural network. Scanlon discloses a wavelet transform feature extractor or a neural network recognizer to ascertain disordered breathing (column 6, lines 40-45). It would have been obvious to one in the art at the time of the invention to combine the inventions of Sullivan et al. In view of Scanlon to maintain an efficient sleep monitoring system.

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In regards to claims 2-3 and 13-14, Sullivan et al. discloses that the air flow sensor is a microphone (11).

In claim 4, Sullivan et al. discloses active noise cancellation for suppressing background noise (column 8, lines 56-63).


In regards to claims 5 and 12, Sullivan et al. discloses event counting (22) and a storage means (26) with respect to time hypopnea and apnea events (column 13, lines 55-65).

In regards to claims 7-8, 10, and 15-16, Scanlon discloses the use of a logarithmic converter for converting the signal representing the estimated volume of air flow and supplying the same to the neural network pattern recognizer (columns 5-6, lines 45-47). It would have been obvious to one in the art at the time of the invention to combine the inventions of Sullivan et al. In view of Scanlon to maintain an efficient sleep monitoring system.

In regards to claim 9, Sullivan et al. discloses the use of a oxygen saturation sensor as well known in the art (column 1, lines 50-65).

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Astorino whose telephone number is (703) 306-9067.



M. Astorino

August 16, 1999

Samuel Gilbert
Samuel Gilbert
Primary Examiner
AU 3736